# Idaho's Conservation Reserve Enhancement Program
# Eastern Snake Plain Aquifer

## FY 2010 CREP Annual Performance Report (CEP-68R)

**Purpose**

The purpose of this Annual Performance Report (CEP-68R) is to fulfill the State of Idaho's commitment under the terms and conditions of its agreement dated May 2006 with the United States Department of Agriculture (USDA) and Commodity Credit Corporation (CCC) concerning the implementation of the Idaho Eastern Snake Plain Aquifer Conservation Reserve Enhancement Program. This report covers Fiscal Year 2010, defined as October 1, 2009 through September 30, 2010.

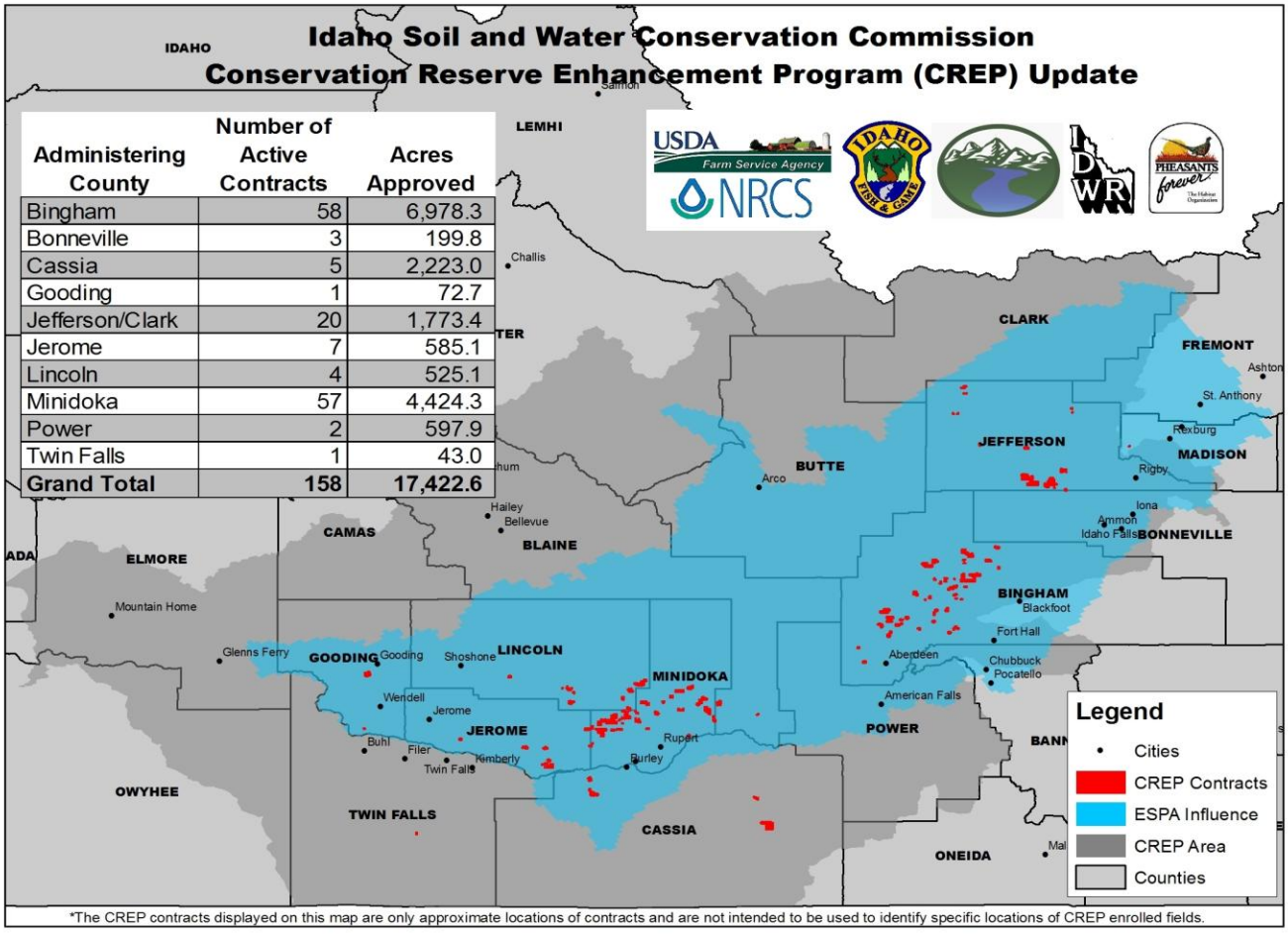
**Background**

The Idaho Conservation Reserve Enhancement Program (Idaho CREP) agreement between the State of Idaho, USDA and CCC was signed in May 2006 for the improvement of water quantity and quality in Idaho. Other conservation issues addressed include the enhancement of wildlife habitat through establishment of vegetative cover to reduce irrigation water consumptive use and agricultural chemical and sediment runoff to the waters of the state. CREP is a part of the Conservation Reserve Program (CRP) operated by the Farm Service Agency (FSA). Other agencies involved with this program include Idaho Soil & Water Conservation Commission (SWC), Idaho Department of Water Resources (IDWR), Idaho Department of Fish and Game (IDFG), Pheasants Forever, and the Idaho Ground Water Appropriators (IGWA).

The Idaho CREP is designed to address issues related to water shortages in the Eastern Snake Plain Aquifer (ESPA). Increased use of ground water, drought, and changing irrigation practices have resulted in decreased spring flows of tributaries to the Snake River. The Idaho CREP has been established with the goal of retiring up to 100,000 acres of ground water irrigated land. This reduction of use is to provide the water savings of up to 200,000 acre-feet annually.

Pursuant to the terms of this agreement, SWC and IDWR shall provide a report to FSA summarizing the status of enrollments under Idaho CREP and progress on fulfilling the other commitments of the program. The report following contains the program updates for fiscal year 2010.

## CREP PROGRAM STATUS FOR FISCAL YEAR 2010




| Administering County | Number of Active Contracts | Acres Approved |
|---|---|---|
| Bingham | 58 | 6,978.3 |
| Bonneville | 3 | 199.8 |
| Cassia | 5 | 2,223.0 |
| Gooding | 1 | 72.7 |
| Jefferson/Clark | 20 | 1,773.4 |
| Jerome | 7 | 585.1 |
| Lincoln | 4 | 525.1 |
| Minidoka | 57 | 4,424.3 |
| Power | 2 | 597.9 |
| Twin Falls | 1 | 43.0 |
| **Grand Total** | **158** | **17,422.6** |

Idaho CREP Status of Active Contracts by Administering County (as of 10/1/2010)

**Level of Program Participation**

FY 2010 concluded with 158 active contracts managed on 17,422 acres. Highlight of activities included:

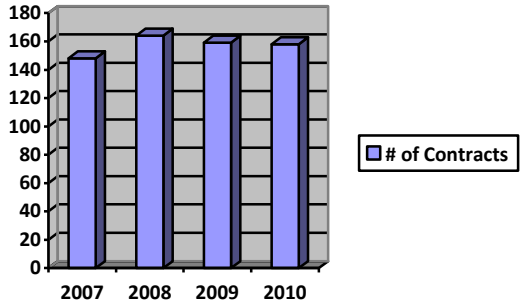
- Six new contracts approved on 247 acres
- 55 of the total number of contracts have Habitat Improvement Program agreements with IDFG on a on total of 9,243 acres
- Three contracts re-seeded 574 acres
- 36 revisions to existing contracts were prepared
- One termination completed on 34 acres
- 28 contracts on 4,873 acres were certified as established
- One-time Idaho Incentive Payments (IIP) were made on 179 acres

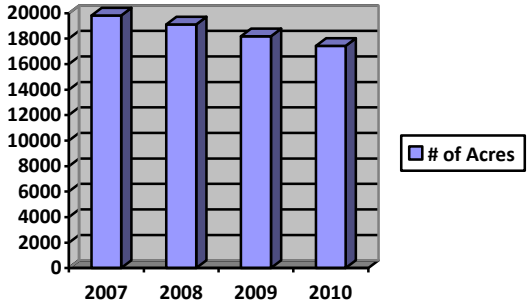
SWC field staff physically visited each field at least twice during the fiscal year to determine the status of the CREP seedlings and then follow up with each contract participant on an individual basis depending on the status of their field. Certifications for established fields were commenced by SWC staff in the summer of 2009. While there are additional fields that contain established stands, they still do not meet the minimum requirements for contract certification and are not included in the following totals:

| Federal Fiscal Year | Certified Contracts | Certified Acres |
|---|---|---|
| 2009 | 7 | 685 |
| 2010 | 28 | 4,873 |
| **TOTAL** | **35** | **5,558** |

Of the total active contracts, approximately 90% of eligible practices are classified CP2 – Establishment of Permanent Native Grasses and 10% are classified as CP4D – Permanent Wildlife Habitat Noneasement. Producers are attracted to the benefits of additional cost-share available under CP2 from IDFG. CP22 – Riparian Buffer (Cropland Only) and CP25 – Rare and Declining Habitat have not generated any interest from producers and CP12 – Wildlife Food Plot is not being promoted due to the nature of the practice using additional water to grow wildlife food and not to grow the native grasses.

**Trends in Number of Contracts and Acres Enrolled**




| Federal Fiscal Year | Number of Contracts | Number of Acres |
|---|---|---|
| 2007 | 148 | 19,818 |
| 2008 | 164 | 19,110 |
| 2009 | 159 | 18,189 |
| 2010 | 158 | 17,422 |

While the number of CREP contracts has remained consistent since inception, the number of acres enrolled has decreased. Producers are reluctant to enroll land when commodity prices have seen a significant increase over the last year. Despite the reduced state budget and reductions in staff and resources, efforts to promote the Idaho CREP program included both formal and informal outreach to producers and coordination efforts with partner agencies. The CREP Coordinator and support staff attended monthly board meetings of conservation districts within the CREP area, attended a Sage Grouse tour with the Governor's Office of

Species Conservation and met with area legislators to discuss the benefits of the program. Staff from all partner agencies made formal presentations to legislative interim committee members in the Magic Valley and at a SWC public meeting in eastern Idaho. Other outreach efforts included meetings with the Raft River Irrigation District to discuss future water savings strategies, and meetings with the Butte irrigation district to discuss the possibility of surface water conservation efforts.

**Success Stories**

As in years past, several CREP participants have expressed their appreciation for the program. These are people who farm in areas where they continue to experience their water levels decreasing and their pumping costs increasing. Some landowners have been able to retire their marginal land so they can farm more profitable acreages, but continue to have concerns that the better ground may need to be enrolled into CREP if the water levels continue to decline.

Re-seeding Strategies

CREP participants are experiencing success using different methods on field re-seedings in challenging areas. One option includes killing off existing weed species with herbicide and then following with a prescribed burn to remove the residue and create a clean seedbed. The participant is then able to seed directly into the field that fall or early the following spring. Additionally, by killing the vegetation early in the season, producers are able to burn off weed residue when vegetation in neighboring areas are still green, thereby greatly reducing the chance of wildfires.

Another strategy that CREP participants use is seeding an all-grass species mix, which gives them the ability to use a selective broadleaf herbicide early spring for weed control. Having the ability to kill the weeds early in the spring allows the native grasses to utilize the available soil moisture that would have otherwise been taken by the weeds. This gives the native grasses a better chance at establishment. After the weeds are under control and the native grasses are established, the participant can then inter-seed any desirable forb or legume species. Producers are more optimistic about getting their stands established by having the latitude of utilizing chemicals for weed control. With this strategy, they feel that there is a much better chance of getting their stand established.

Increased Efficiency

SWC field staff has been using a new streamlined process of developing conservation plans on new contracts and have been able to reduce redundant paperwork and increase efficiency. As a result of new policies adopted by Idaho Natural Resources Conservation Service (NRCS) in the new General CRP Signup-39, the process of developing a conservation plan has been streamlined to reduce duplication of paperwork and staff time spent developing conservation plans.

SWC staff merges all active contract shape files into one Arc Map file so that support staff can expedite the process of locating individual fields. This “road map” enables field staff to plan field visits more efficiently, and select areas that need further follow up.

## Results of the Annual Monitoring Program

To date, the total amount of acreage enrolled in Idaho CREP can be compared to the retirement of water usage from 124 pivots covering 140 acres each or 27 sections of land (640 acres = one section). Idaho CREP is at 17% over the overall project goals of retiring 100,000 acres of irrigated cropland and saving 200,000 acre-feet of water annually throughout the ESPA.

### Water Savings

IDWR monitors and documents actual water savings. Each acre enrolled into CREP equates to a water savings of approximately two acre-feet. With over 17,422 acres currently enrolled, approximately 35,000 acre-feet of water is being saved annually. The Idaho CREP is currently at 17% of the goal of 200,000 acre-feet annually. The equivalent water savings is still close to the consumptive use of approximately 330,000 people each year. The geographic extent of these water savings benefits can be shown using the IDWR ground water model to estimate river reach gains on the ESPA.

Benefits can be seen in the small but gradual increases in spring levels in the Thousand Springs area based on IDWR ground water modeling efforts. A larger benefit can be seen in the American Falls area and these are both expected to grow in the future based on current efforts.

### Power Savings

IDWR is collecting information about actual power savings, and an estimate can be computed utilizing the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) Energy Consumption Awareness Tool for irrigation, which estimates an average of 3,950 kilowatts per hour saved per acre. For the enrollment acres in Idaho CREP (17,422), it is estimated that 68,816,900 kilowatt hours are now being saved annually. This puts Idaho CREP at approximately 23% of the goal of saving 300,000,000 kilowatt hours annually.

### Soil Erosion

Due to the highly erodible nature of the farm ground that is enrolled in the CREP program, by changing the ground cover from annual crops or stream and canal banks to permanent vegetative cover, it is estimated that there will be an average annual reduction in soil erosion of two tons per acre per year due to water erosion and six tons per acre per year due to wind erosion. This equates to a total estimated soil savings of 34,844 tons per acre per year of soil due to water erosion and 104,532 tons per acre per year of soil due to wind erosion.

### Pesticides and Nutrients

Often attached to these eroded soil particles are nutrients such as Nitrate ($NO_3$) and Phosphate ($PO_4$), pesticides, or other agricultural chemicals applied to the field. By reducing the amount of soil erosion, the amount of nutrients and pesticides reaching water bodies or ground water downstream is greatly reduced. Considering variables such as amount of fertilizer applied to a field, the type of fertilizer used, or crop rotation, it is estimated that 1.7 to 4.5 million pounds of fertilizer are no longer being applied annually to enrolled acres and therefore not entering water bodies.

**Wildlife Populations and Habitat**

Of special concern within the Idaho CREP area is the habitat of grassland-nesting birds including the sharp-tailed grouse and sage grouse. Sage grouse are of particular concern throughout the state due to a steady decline in population since monitoring began in the 1950's. However, more extensive declines have occurred in the Upper Snake region, which encompasses much of the Idaho CREP area.[1]

IDFG Brood Routes

During August 2010, IDFG personnel conducted two roadside brood routes within the Idaho CREP boundaries. These routes were added to the standard routes surveyed to develop trend data for grassland-nesting birds. Each route consisted of approximately 20 miles of roads driven within the CREP boundaries in which the number and species of upland game was tallied. The IDFG staff will continue to conduct these surveys for the term of the CREP program in an attempt to determine wildlife response in relation to the development of CREP projects. Staff encountered challenges due to the general CRP sign-up falling directly during the same time as the normal brood routes and did not conduct as many routes as normal.

Fish Habitat

The benefits of Idaho CREP peak during the irrigation season when the demand for irrigation water is the greatest. Voluntary demand reductions programs like CREP reduce the demand during this peak, allowing for more water to stay in the aquifer. Aquatic habitat will continue to improve through the continued reduction of sediment, pesticides, and harmful nutrients entering the waterways. Improved water quality and increased stream flows can provide a higher quality habitat for various native aquatic species as well as sensitive species found throughout the Thousand Springs reach of the Snake River.

**Grass Establishment**

The spring of 2010 was favorable for allowing successful vegetative establishment due to the record amounts of rainfall in several parts of the ESPA. Field staff found some stands of native grasses developing for the first time in three years. Some of the fields originally scheduled to be re-seeded have been deferred for re-evaluation because of the promising emergence of native grasses and forbs.

Despite the successes, this past year also saw challenges. Weeds emerged with last year's growth as the cool, wet spring allowed weeds such as mustards, cheat grass, and kochia to aggressively compete with the native grass stands. Additionally, there were an increase in agricultural pests such as grasshoppers and rodents. Voles and mice also flourished, which pressured the grasses and legumes as they ate the base of the plant crowns and roots. Because of the weeds and pests, staff and producers had to use creative methods for control, which

[1] Conservation Plan for the Greater Sage-grouse in Idaho, Idaho Department of Fish and Game, 2006

included the use of herbicides, burning, or clipping the fields before re-seeding. In order to address these problems, SWC staff has been developing re-seeding plans on a case-by-case basis and will evaluate next year to see how the stands recover.

Other fields where seedlings have failed will require participants to re-seed in an attempt to re-establish the conservation cover. Cost share is available for re-seeding as long as the factors of failure were outside the control of the producer. The USDA Plant Materials Center in Aberdeen and their NRCS Specialists have continued to provide excellent support with timely recommendations and shared experiences in the CREP area.

Other solutions to minimize weed pressures include adding a small percentage of introduced grasses to the mix for re-seeding applications. The working group agreed that some introduced grasses would provide additional competition against the weeds and help to get the native grass established. Although not cost-shared through the CREP program, some local Pheasants Forever chapters are providing incentives for the alternative grass mix.

SWC and IDFG has been monitoring effectiveness of the establishment of the re-seeding applications using a very hardy variety that is easily established and provides great wildlife benefits. The species of grasses provide multiple vegetative heights and diverse maturing dates which will allow varied and good cover for wildlife habitat.

## Recommendations for Program Improvement

### 1. Streamline the process for modifying active contracts

There is a considerable additional workload for all agency personnel when a contract participant decides to modify an active contract. The varying stages and timeline process and specific requirements from each agency make the process slow to completion. IDWR, FSA, and SWC have been working towards a solution to create a common access data base located in a secure environment so that all agencies can access and update data in "real time".

Recommendations have been sought within the working group for trying to expedite the revision process. Before the CREP portion of the database can be developed, IDWR must create a new main component within that database. Once it is created, the CREP component will be attached and can allow date flow in a common, secure, data system, saving staff time greatly reducing and response time for revisions. Less time spent on paperwork can equate to more time in the field for outreach, monitoring, and evaluation.

### 2. Develop consistent methods for gathering trend data for grassland-nesting birds

In FY 2009, IDFG began tracking brood routes within active CREP areas containing Habitat Improvement Program (HIP) agreements and added six roadside brood routes to their standard routes. This year, 55 contracts were identified as having HIP agreements but only two roadside brood routes were conducted. The general CRP 39 sign up period occurred at the same time as the normal brood routes and staff were not able to conduct as many routes as usual.

Staff will be evaluating different methods for tracking consistent trend data from year to year in order to more accurately capture the impact of improved habitat for grassland-nesting birds in order to meet the goals of the CREP agreement.

### 3. Increase participation levels

Based on level participation trends over the last four fiscal years, agencies will need to evaluate different methods for increasing participation in order to meet program goals. Challenges such as commodity prices, reduced state budgets, and limited staff time will be considered to evaluate the success of each opportunity.

A. There have been a number of changes this year that should make it easier for enrollment of new land within the Idaho CREP area. These policy updates by FSA (listed below) makes virtually all groundwater-irrigated cropland meeting cropping and water history now eligible within the whole CREP area:

- FSA and IDWR are close to finishing an update for eligibility requirements to reflect the current crop/water history eligibility for the program. Land that was not eligible

under previous crop/water history may now qualify with the updated history requirements.

- An update to FSA's policy this year allowing all non-highly erodible land (NHEL) cropland to be eligible for CREP in the project area so there is no longer a need to have the Conservation Priority Areas (CPA).

- Another change is that CREP is no longer counted against CRP acres in Bannock and Power counties. These counties that previously were not eligible for the program are now eligible.

Because of the recent changes from FSA, all staff will market the information to the new areas making sure everyone is aware of the new change in policy through outreach, meetings, mailings, and informing Districts and FSA field staff.

B. With NHEL fields now eligible for Idaho CREP, significant interest has been generated from the Raft River and Big Lost areas. Outreach and education should be pursued in the Raft River area to generate as much participation as possible because of the support of the irrigation district. Further discussions and evaluation need to occur between IDWR, FSA, and the Big Lost irrigation district to determine how the surface water savings can be documented.

**4. Maintain Staff Time and Resources**

Many agencies had significant reductions in their overall budget during FY 2010 and expect additional decreases during FY 2011. In order to increase participation and manage program goals and expectations, additional staff and resources are needed. SWC advertised a field staff position in eastern Idaho and will assign part of the CREP workload to that employee.

**Summary of Non-Federal Program Expenditures**

**PROGRAM TOTALS – FY 2007 THROUGH FY 2010**

| | |
|---|---|
| FY 2007 | $5,230,360 |
| FY 2008 | $35,390,421 |
| FY 2009 | $3,814,925 |
| FY 2010 | $4,436,640 |
| **PROGRAM TOTAL TO DATE:** | **$48,872,346** |

| | |
|---|---|
| Idaho Incentive Payments - $3 million total budget<br>Current: $30 per acre (one-time payment to participants located within groundwater districts) | **$509,492** |

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FY 2010 TOTAL STATE CASH AND IN-KIND CONTRIBUTIONS:

| | |
|---|---|
| Idaho Department of Water Resources | $3,829,554 |
| Idaho Soil & Water Conservation Commission | $599,628 |
| Idaho Ground Water Appropriators | $5,370 |
| Idaho Department of Fish and Game | $2,088 |
| **TOTAL** | **$4,436,640** |

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FY 2010 DETAILED SUMMARY BY AGENCY:

**Idaho Department of Water Resources**

| | |
|---|---|
| ESPA CAMP Implementation | $2,454,505 |
| ESPA Recharge Program | $235,941 |
| ESPA Monitoring Program | $328,451 |
| **Water District Water Master Expenses** | |
| WD 01 | $560,300 |
| WD 120 | $96,400 |
| WD 130 | $72,657 |
| WD 36A | $4,400 |
| WD 110 and 100 | $54,400 |
| WD 140 | $22,500 |
| **TOTAL** | **$3,829,554** |

## Idaho Soil & Water Conservation Commission

| | | |
|---|---|---|
| **Employee Wages** | | $70,516 |
| Chuck Pentzer, CREP Coordinator | | |
| Jordan Tollefson | | |
| Terry Halbert | | |
| Brian Reed | | |
| **Operating Expenses** | | $7,771 |
| **Annual Loans/Grants** | | $521,341 |
| Resource Conservation and Rangeland Development Program | $68,500 | |
| Water Quality Program for Agriculture | $452,841 | |
| **TOTAL** | | **$599,628** |

## Idaho Ground Water Appropriators

| | |
|---|---|
| Idaho Incentive Payments | $5,370 |
| **TOTAL** | **$5,370** |

## Idaho Department of Fish and Game

| | |
|---|---|
| **Employee Wages** | $2,088 |
| Sal Palazzolo | |
| Mark Fleming | |
| Brett Gullett | |
| Don Kemner | |
| **TOTAL** | **$2,088** |

Pursuant to the terms of the contract, it should be noted that the State of Idaho has met its obligation to use $5 million to purchase permanent private water rights in the ESPA CREP area no later than December 31, 2010. During 2007, the State of Idaho partnered with the City of Twin Falls and the North Snake and Magic Valley ground water districts to purchase the Pristine Springs area for a total of $26 million. The purchase of this area addressed a number of conflicts between spring water users and ground water users in the Magic Valley and provided the City of Twin Falls with a fresh water source to improve the quality of its water supply.[2] This expenditure was reported as a line item by IDWR in the Fiscal Year 2008 Annual Report.

[2] From: US Fed News Service, Including US State News Article date April 28, 2008, Copyright © HT Media Ltd. All Rights Reserved. Provided by ProQuest LLC.

**Photos of Idaho CREP Fields FY 2010**

*Established CREP Fields*

*Established CREP Fields*

*Established CREP Fields*

*Hawk Nest*

*Young Pronghorn Antelope*

*Canada Geese*

*Native grass re-seeding*

*Burning off weed residue for a re-seeding*